

Application Serial No.: 10/816,703  
Applicant: Clive Reginald STEER  
Response to Office Action Mailed: July 11, 2007  
Response Mailed: January 10, 2008

Docket No.: M00A259

### **III. REMARKS**

United States Serial No. 10/816,703 was filed on April 2, 2004. In view of remarks set forth herein, Applicants respectfully request reconsideration and allowance of claims 1-45.

#### **Allowable Subject Matter:**

It is acknowledged that claims 5-7, 9, 18-22, 30-31, 34-36, 38, 42-43, and 45, are considered to be allowable if written in independent form, including all of the subject matter of the independent base claim and any intervening claims.

#### **Amendments to the Claims:**

Claim 1 has been amended to add the feature, "and at a frequency and intensity substantially the same as that of the detected noise" after "at a polarity substantially opposite to a polarity of the detected noise".

Claim 12 has been amended to add the feature, "and at a frequency and intensity substantially the same as that of the detected noise" after "at a polarity substantially opposite to a polarity of the detected noise".

Claim 25 has been amended to add the feature, "and at a frequency and intensity substantially the same as that of the detected noise" after "at a polarity substantially opposite to a polarity of the detected noise".

Claim 41 has been amended to add the feature, "and at a frequency and intensity substantially the same as that of the detected noise" after "at a polarity substantially opposite to a polarity of the detected noise".

Applicants submit that the above feature incorporated into each of claims 1, 12, 25, and 41 is fully supported by the original specification. The original specification discloses at page 5, lines 8-10 that, "some of the elements to emit sound at substantially the same intensity and frequency as that of the detected noise". The original specification discloses at page 6, lines 8-9 that, "the emitted sound may be at substantially the same intensity and frequency as that of the detected noise". The original specification discloses at page 7,

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lines 18-21 that, "the noise producing object... may produce... sound that... may vary... in polarity, pitch, intensity, and/or frequency over time."

**35 U.S.C. §103(a) Rejection**

Claims 1-4, 8, 10-17, 23-29, 32, 33, 37, 39-41, and 44 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,029,218 ("Nagayasu") in view of U.S. Patent No. 6,625,285 ("Ohashi") for the reasons set forth in the Office Action at Pages 2-6. Applicants respectfully traverse.

To establish a prima facie case of obviousness under 35 U.S.C. §103(a) there must be (1) a suggestion or motivation to modify a reference, (2) a reasonable expectation of success, and (3) the modification of the reference must teach or suggest all claimed limitations. *In re Vaeck*, 947 F.2d 488 (Fed.Cir. 1991).

The Office Action alleges that the combination of Nagayasu discloses all of the features of claims 1, 12, and 25 except emitting a sound at a polarity substantially opposite to the polarity of the detected noise. Applicants respectfully traverse. Each of the amended claims 1, 12, and 25 include the feature of elements to emit sound at a polarity substantially opposite to a polarity of the detected noise, and at a frequency and intensity substantially the same as that of the detected noise. Neither Nagayasu, Ohashi, nor their combination, disclose emission of a sound having a waveform of frequency and intensity substantially the same as that of the detected noise.

While Nagayasu does address the concept of frequency, Nagayasu only does so in the context of the frequency domain signals created by the Fourier transform, the frequency of alteration of filter factors, the frequency of the components, the frequency of the rotation of the driving device; and the frequency of an external noise. USPN 5,029,218; col. 2, lines 6-10; col. 3, lines 45-47; col. 4, lines 42-49. Where Nagayasu makes reference to the control sound frequency, in FIG 7C and 8C, it discloses only frequencies of the components and only discloses them graphically without a scale or other reference allowing comparison to the noise. That is, Nagayasu does not address the frequency of the emitted sound, does not disclose that the frequency of the emitted sound should be substantially the same as that of the noise, and never discloses that both the frequency and amplitude of the emitted sound should be substantially the same as that of the noise.

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As it is used in the Original Specification and as it is discussed in the Office Action, polarity of the sound is used to describe the phase angle of the sound wave. Opposite polarity is a 180 degree phase angle with respect to the original polarity. The phase angle is only one component of the equation describing the sound to be produced to partially cancel the noise and is independent of the frequency and the amplitude.

The Office Action alleges that the combination of Nagayasu discloses all of the features of claim 41 except emitting a sound at a polarity substantially opposite to the polarity of the detected noise. Applicants respectfully traverse. Amended claim 41 includes the feature of emitting sound at a polarity substantially opposite to a polarity of the detected noise, and at a frequency and intensity substantially the same as that of the detected noise. As discussed above, neither Nagayasu nor Ohashi disclose emission of a sound having a waveform of frequency and intensity substantially the same as that of the detected noise.

Thus, Applicants respectfully submit that the combination of Nagayasu and Ohashi fails the third requirement of *In re Vaeck*. That is, the combination of Nagayasu and Ohashi still fails to include all of the features of any of claims 1, 12, 25, or 41 because neither Nagayasu, Ohashi, nor their combination, teach emission of a sound having a waveform of frequency and intensity substantially the same as that of the detected noise.

Applicants therefore request withdrawal of the rejection of claims 1, 12, 25, and 41. Because the rejected dependant claims all incorporate directly or indirectly all of the features of at least one of claims 1, 12, 25, or 41, Applicants further request the withdrawal of this rejection of the dependant claims 2-4, 8, 10-11, 13-17, 23-24, 26-29, 32, 33, 37, 39-40.

### **Conclusion**

In view of the above amendments and remarks, Applicants respectfully request that the claim rejections of claims 1-4, 8, 10-17, 23-29, 32, 33, 37, 39-41, and 44 be withdrawn. Applicants submit that the objections to claims 5-7, 9- 18-22, 30-31, 34-36, 38, 42-43, and 45 are also rendered moot and should be withdrawn. Applicants further request the issuance of a formal notice of allowability directed to claims 1-45.

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Should the Examiner have any questions, Applicants' undersigned attorney would welcome a telephone call.

Respectfully submitted,



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